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Certifications

WBENC: 237019 **HUB:** 1752439743100-86536 **DBE:** VN 20657
NCTRCA WFWB38444Y0909

NELAP Certifications

Lubbock: T104704219-08-TX LELAP-02003 Kansas E-10317 **El Paso:** T104704221-08-TX LELAP-02002 **Midland:** T104704392-08-TX

Analytical and Quality Control Report

Brad Davis
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Report Date: September 18, 2009

Work Order: 9090319

Project Name: HELSTF Chromate Spill Groundwater

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
209097	HLSF-0143-HMW-013-0909	water	2009-09-01	10:30	2009-09-02

Comment(s)

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

Notes:

For inorganic analyses, the term MQL should actually read PQL.

Standard Flags

U - Not detected. The analyte is not detected above the SDL.

J - Estimated. The analyte is positively identified and the value is approximated between the SDL and MQL.

B - The sample contains less than ten times the concentration found in the method blank.

JB - The analyte is positively identified and the value is approximated between the SDL and MQL.
The sample contains less than ten times the concentration found in the method blank.
The result should be considered non-detect to the SDL.

Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Case Narrative

Samples for project HELSTF Chromate Spill Groundwater were received by TraceAnalysis, Inc. on 2009-09-02 and assigned to work order 9090319. Samples for work order 9090319 were received intact without headspace and at a temperature of 7.0 deg. C, just sampled, on ice.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
Ag, Total	S 6010B	54079	2009-09-09 at 09:16	63374	2009-09-09 at 12:57
Alkalinity	SM 2320B	54231	2009-09-10 at 11:00	63527	2009-09-10 at 11:00
Al, Total	S 6010B	54079	2009-09-09 at 09:16	63374	2009-09-09 at 12:57
Ammonia	SM 4500-NH3 B,C	54092	2009-09-05 at 16:00	63370	2009-09-05 at 17:00
As, Total	S 6010B	54079	2009-09-09 at 09:16	63374	2009-09-09 at 12:57
Ba, Total	S 6010B	54079	2009-09-09 at 09:16	63374	2009-09-09 at 12:57
Be, Total	S 6010B	54079	2009-09-09 at 09:16	63374	2009-09-09 at 12:57
Bromide (IC)	E 300.0	54360	2009-09-03 at 16:35	63672	2009-09-03 at 16:35
Ca, Total	S 6010B	54079	2009-09-09 at 09:16	63545	2009-09-15 at 08:54
Cd, Total	S 6010B	54079	2009-09-09 at 09:16	63374	2009-09-09 at 12:57
Chloride (IC)	E 300.0	54360	2009-09-03 at 16:35	63672	2009-09-03 at 16:35
Chromium, Hexavalent	SM 3500-Cr B	54057	2009-09-02 at 09:46	63330	2009-09-02 at 09:46
Co, Total	S 6010B	54079	2009-09-09 at 09:16	63374	2009-09-09 at 12:57
Cr, Dissolved	S 6010B	54154	2009-09-11 at 08:26	63462	2009-09-11 at 11:56
Cr, Total	S 6010B	54079	2009-09-09 at 09:16	63374	2009-09-09 at 12:57
Cu, Total	S 6010B	54079	2009-09-09 at 09:16	63374	2009-09-09 at 12:57
Fe, Total	S 6010B	54079	2009-09-09 at 09:16	63374	2009-09-09 at 12:57
Fluoride (IC)	E 300.0	54360	2009-09-03 at 16:35	63672	2009-09-03 at 16:35
Hg, Total	S 7470A	54009	2009-09-04 at 13:00	63280	2009-09-04 at 14:18
K, Total	S 6010B	54079	2009-09-09 at 09:16	63545	2009-09-15 at 08:54
Mg, Total	S 6010B	54079	2009-09-09 at 09:16	63545	2009-09-15 at 08:54
Mn, Total	S 6010B	54079	2009-09-09 at 09:16	63374	2009-09-09 at 12:57
Mo, Total	S 6010B	54079	2009-09-09 at 09:16	63374	2009-09-09 at 12:57
Na, Total	S 6010B	54079	2009-09-09 at 09:16	63545	2009-09-15 at 08:54
Ni, Total	S 6010B	54079	2009-09-09 at 09:16	63374	2009-09-09 at 12:57
Nitrate and Nitrite as N	SM 4500-NO3 E	54370	2009-09-17 at 09:43	63681	2009-09-17 at 15:44
O/G	E 1664	54391	2009-09-17 at 11:00	63699	2009-09-17 at 14:30
Pb, Total	S 6010B	54079	2009-09-09 at 09:16	63374	2009-09-09 at 12:57
pH	SM 4500-H+	54064	2009-09-02 at 12:00	63341	2009-09-02 at 12:00
P, Total	S 6010B	54079	2009-09-09 at 09:16	63374	2009-09-09 at 12:57
Sb, Total	S 6010B	54079	2009-09-09 at 09:16	63374	2009-09-09 at 12:57
Se, Total	S 6010B	54079	2009-09-09 at 09:16	63374	2009-09-09 at 12:57
SO4 (IC)	E 300.0	54360	2009-09-03 at 16:35	63672	2009-09-03 at 16:35
TDS	SM 2540C	54173	2009-09-03 at 14:20	63473	2009-09-03 at 14:20
TKN	E 351.3	54150	2009-09-09 at 11:15	63441	2009-09-09 at 15:00
Tl, Total	S 6010B	54079	2009-09-09 at 09:16	63374	2009-09-09 at 12:57
TOC	SM 5310C	54065	2009-09-08 at 13:26	63340	2009-09-08 at 13:29
TPH DRO	Mod. 8015B	54035	2009-09-04 at 15:00	63307	2009-09-07 at 18:00
TPH GRO	S 8015B	53976	2009-09-03 at 14:48	63239	2009-09-03 at 14:48
V, Total	S 6010B	54079	2009-09-09 at 09:16	63374	2009-09-09 at 12:57
Zn, Total	S 6010B	54079	2009-09-09 at 09:16	63374	2009-09-09 at 12:57

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 9090319 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Analytical Report

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory:	Lubbock				
Analysis:	Ag, Total	Analytical Method:	S 6010B	Prep Method:	S 3010A
QC Batch:	63374	Date Analyzed:	2009-09-09	Analyzed By:	RR
Prep Batch:	54079	Sample Preparation:	2009-09-09	Prepared By:	KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Silver	U	<0.00111	<0.00500	<0.00111	mg/L	1	0.00111	0.005	0.00111

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory:	Lubbock				
Analysis:	Al, Total	Analytical Method:	S 6010B	Prep Method:	S 3010A
QC Batch:	63374	Date Analyzed:	2009-09-09	Analyzed By:	RR
Prep Batch:	54079	Sample Preparation:	2009-09-09	Prepared By:	KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Aluminum		**3.25**	**3.25**	<0.00301	mg/L	1	0.00301	0.05	0.00301

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory:	El Paso				
Analysis:	Alkalinity	Analytical Method:	SM 2320B	Prep Method:	N/A
QC Batch:	63527	Date Analyzed:	2009-09-10	Analyzed By:	JG
Prep Batch:	54231	Sample Preparation:		Prepared By:	JG

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Hydroxide Alkalinity	U	<1.00	<1.00	<1.00	mg/L as CaCo3	1	1.00	1	1
Carbonate Alkalinity	U	<1.00	<1.00	<1.00	mg/L as CaCo3	1	1.00	1	1
Bicarbonate Alkalinity		**200**	**200**	<4.00	mg/L as CaCo3	1	4.00	4	4
Total Alkalinity		**200**	**200**	<4.00	mg/L as CaCo3	1	4.00	4	4

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory:	Lubbock				
Analysis:	Ammonia	Analytical Method:	SM 4500-NH3 B,C	Prep Method:	N/A
QC Batch:	63370	Date Analyzed:	2009-09-05	Analyzed By:	AH
Prep Batch:	54092	Sample Preparation:	2009-09-05	Prepared By:	AH

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Ammonia-N	J	**0.504**	<1.00	<0.353	mg/L	1	0.353	1	0.353

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory: Lubbock
Analysis: As, Total Analytical Method: S 6010B Prep Method: S 3010A
QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 Sample Preparation: 2009-09-09 Prepared By: KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Arsenic	U	<0.00448	<0.0100	<0.00448	mg/L	1	0.00448	0.01	0.00448

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory: Lubbock
Analysis: Ba, Total Analytical Method: S 6010B Prep Method: S 3010A
QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 Sample Preparation: 2009-09-09 Prepared By: KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Barium		**0.0710**	**0.0710**	<0.00105	mg/L	1	0.00105	0.005	0.00105

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory: Lubbock
Analysis: Be, Total Analytical Method: S 6010B Prep Method: S 3010A
QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 Sample Preparation: 2009-09-09 Prepared By: KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Beryllium	U	<0.000450	<0.00200	<0.000450	mg/L	1	0.000450	0.002	0.00045

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory: El Paso
Analysis: Bromide (IC) Analytical Method: E 300.0 Prep Method: N/A

QC Batch: 63672 Date Analyzed: 2009-09-03 Analyzed By: JR
Prep Batch: 54360 Sample Preparation: 2009-09-03 Prepared By: JR

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Bromide	U	<0.197	<1.35	<0.197	mg/L	5	0.197	0.27	0.0394

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory: Lubbock
Analysis: Ca, Total Analytical Method: S 6010B Prep Method: S 3010A
QC Batch: 63545 Date Analyzed: 2009-09-15 Analyzed By: RR
Prep Batch: 54079 Sample Preparation: 2009-09-09 Prepared By: KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Calcium		**524**	**524**	<1.17	mg/L	10	1.17	1	0.117

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory: Lubbock
Analysis: Cd, Total Analytical Method: S 6010B Prep Method: S 3010A
QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 Sample Preparation: 2009-09-09 Prepared By: KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Cadmium	U	<0.000303	<0.00200	<0.000303	mg/L	1	0.000303	0.002	0.000303

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory: El Paso
Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A
QC Batch: 63672 Date Analyzed: 2009-09-03 Analyzed By: JR
Prep Batch: 54360 Sample Preparation: 2009-09-03 Prepared By: JR

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		**524**	**524**	<32.0	mg/L	50	32.0	1.22	0.6404

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory: El Paso
Analysis: Chromium, Hexavalent Analytical Method: SM 3500-Cr B Prep Method: N/A
QC Batch: 63330 Date Analyzed: 2009-09-02 Analyzed By: MD
Prep Batch: 54057 Sample Preparation: 2009-09-02 Prepared By: JR

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Hexavalent Chromium		**0.0110**	**0.0110**	<0.00594	mg/L	1	0.00594	0.01	0.00594

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory: Lubbock
Analysis: Co, Total Analytical Method: S 6010B Prep Method: S 3010A
QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 Sample Preparation: 2009-09-09 Prepared By: KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Cobalt	J	**0.00100**	<0.00200	<0.000822	mg/L	1	0.000822	0.002	0.000822

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory: Lubbock
Analysis: Cr, Dissolved Analytical Method: S 6010B Prep Method: S 3005A
QC Batch: 63462 Date Analyzed: 2009-09-11 Analyzed By: RR
Prep Batch: 54154 Sample Preparation: 2009-09-11 Prepared By: KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Dissolved Chromium		**0.00300**	**0.00300**	<0.000583	mg/L	1	0.000583	0.001	0.000583

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory: Lubbock
Analysis: Cr, Total Analytical Method: S 6010B Prep Method: S 3010A
QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 Sample Preparation: 2009-09-09 Prepared By: KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Chromium		**0.0350**	**0.0350**	<0.000583	mg/L	1	0.000583	0.005	0.000583

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory:	Lubbock				
Analysis:	Cu, Total	Analytical Method:	S 6010B	Prep Method:	S 3010A
QC Batch:	63374	Date Analyzed:	2009-09-09	Analyzed By:	RR
Prep Batch:	54079	Sample Preparation:	2009-09-09	Prepared By:	KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Copper	J	**0.00400**	<0.00500	<0.000843	mg/L	1	0.000843	0.005	0.000843

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory:	Lubbock				
Analysis:	Fe, Total	Analytical Method:	S 6010B	Prep Method:	S 3010A
QC Batch:	63374	Date Analyzed:	2009-09-09	Analyzed By:	RR
Prep Batch:	54079	Sample Preparation:	2009-09-09	Prepared By:	KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Iron		**2.50**	**2.50**	<0.000872	mg/L	1	0.000872	0.01	0.000872

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory:	El Paso				
Analysis:	Fluoride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	63672	Date Analyzed:	2009-09-03	Analyzed By:	JR
Prep Batch:	54360	Sample Preparation:	2009-09-03	Prepared By:	JR

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Fluoride		**4.43**	**4.43**	<0.217	mg/L	5	0.217	0.17	0.0434

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory:	Lubbock				
Analysis:	Hg, Total	Analytical Method:	S 7470A	Prep Method:	N/A
QC Batch:	63280	Date Analyzed:	2009-09-04	Analyzed By:	TP
Prep Batch:	54009	Sample Preparation:	2009-09-04	Prepared By:	TP

continued . . .

sample 209097 continued ...

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Mercury	U	<0.0000329	<0.000200	<0.0000329	mg/L	1	0.0000329	0.0002	3.29e-05

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory:	Lubbock				
Analysis:	K, Total	Analytical Method:	S 6010B	Prep Method:	S 3010A
QC Batch:	63545	Date Analyzed:	2009-09-15	Analyzed By:	RR
Prep Batch:	54079	Sample Preparation:	2009-09-09	Prepared By:	KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Potassium		**106**	**106**	<1.72	mg/L	10	1.72	1	0.172

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory:	Lubbock				
Analysis:	Mg, Total	Analytical Method:	S 6010B	Prep Method:	S 3010A
QC Batch:	63545	Date Analyzed:	2009-09-15	Analyzed By:	RR
Prep Batch:	54079	Sample Preparation:	2009-09-09	Prepared By:	KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Magnesium		**470**	**470**	<1.60	mg/L	10	1.60	1	0.16

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory:	Lubbock				
Analysis:	Mn, Total	Analytical Method:	S 6010B	Prep Method:	S 3010A
QC Batch:	63374	Date Analyzed:	2009-09-09	Analyzed By:	RR
Prep Batch:	54079	Sample Preparation:	2009-09-09	Prepared By:	KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Manganese		**0.0690**	**0.0690**	<0.000305	mg/L	1	0.000305	0.0025	0.000305

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory:	Lubbock				
Analysis:	Mo, Total	Analytical Method:	S 6010B	Prep Method:	S 3010A
QC Batch:	63374	Date Analyzed:	2009-09-09	Analyzed By:	RR
Prep Batch:	54079	Sample Preparation:	2009-09-09	Prepared By:	KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Molybdenum		**0.189**	**0.189**	<0.00119	mg/L	1	0.00119	0.01	0.00119

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory:	Lubbock				
Analysis:	Na, Total	Analytical Method:	S 6010B	Prep Method:	S 3010A
QC Batch:	63545	Date Analyzed:	2009-09-15	Analyzed By:	RR
Prep Batch:	54079	Sample Preparation:	2009-09-09	Prepared By:	KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Sodium		**1090**	**1090**	<0.500	mg/L	10	0.500	1	0.05

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory:	Lubbock				
Analysis:	Ni, Total	Analytical Method:	S 6010B	Prep Method:	S 3010A
QC Batch:	63374	Date Analyzed:	2009-09-09	Analyzed By:	RR
Prep Batch:	54079	Sample Preparation:	2009-09-09	Prepared By:	KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Nickel	U	<0.00121	<0.00500	<0.00121	mg/L	1	0.00121	0.005	0.00121

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory:	Lubbock				
Analysis:	Nitrate and Nitrite as N	Analytical Method:	SM 4500-NO3 E	Prep Method:	N/A
QC Batch:	63681	Date Analyzed:	2009-09-17	Analyzed By:	KV
Prep Batch:	54370	Sample Preparation:	2009-09-17	Prepared By:	KV

continued . . .

sample 209097 continued ...

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Nitrate and Nitrite as N		**52.6**	**52.6**	<7.00	mg/L	200	7.00	0.1	0.035

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory:	El Paso				
Analysis:	O/G	Analytical Method:	E 1664	Prep Method:	N/A
QC Batch:	63699	Date Analyzed:	2009-09-17	Analyzed By:	JR
Prep Batch:	54391	Sample Preparation:	2009-09-17	Prepared By:	JR

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Oil and Grease	U	<3.60	<5.00	<3.60	mg/L	1	3.60	5	3.6

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory:	Lubbock				
Analysis:	P, Total	Analytical Method:	S 6010B	Prep Method:	S 3010A
QC Batch:	63374	Date Analyzed:	2009-09-09	Analyzed By:	RR
Prep Batch:	54079	Sample Preparation:	2009-09-09	Prepared By:	KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Phosphorous		**0.0720**	**0.0720**	<0.00289	mg/L	1	0.00289	0.025	0.00289

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory:	Lubbock				
Analysis:	Pb, Total	Analytical Method:	S 6010B	Prep Method:	S 3010A
QC Batch:	63374	Date Analyzed:	2009-09-09	Analyzed By:	RR
Prep Batch:	54079	Sample Preparation:	2009-09-09	Prepared By:	KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Lead	U	<0.00326	<0.00500	<0.00326	mg/L	1	0.00326	0.005	0.00326

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory:	El Paso				
Analysis:	pH	Analytical Method:	SM 4500-H+	Prep Method:	N/A
QC Batch:	63341	Date Analyzed:	2009-09-02	Analyzed By:	JG
Prep Batch:	54064	Sample Preparation:	2009-09-02	Prepared By:	JR

Parameter	Flag	Result	RL Units	Dilution	RL
pH		7.22	s.u.	1	

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory:	Lubbock				
Analysis:	Sb, Total	Analytical Method:	S 6010B	Prep Method:	S 3010A
QC Batch:	63374	Date Analyzed:	2009-09-09	Analyzed By:	RR
Prep Batch:	54079	Sample Preparation:	2009-09-09	Prepared By:	KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Antimony	U	<0.00440	<0.0200	<0.00440	mg/L	1	0.00440	0.02	0.0044

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory:	Lubbock				
Analysis:	Se, Total	Analytical Method:	S 6010B	Prep Method:	S 3010A
QC Batch:	63374	Date Analyzed:	2009-09-09	Analyzed By:	RR
Prep Batch:	54079	Sample Preparation:	2009-09-09	Prepared By:	KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Selenium		**0.0330**	**0.0330**	<0.00508	mg/L	1	0.00508	0.02	0.00508

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory:	El Paso				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	63672	Date Analyzed:	2009-09-03	Analyzed By:	JR
Prep Batch:	54360	Sample Preparation:	2009-09-03	Prepared By:	JR

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Sulfate		**4070**	**4070**	<50.4	mg/L	100	50.4	1.33	0.5038

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory:	El Paso				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	63473	Date Analyzed:	2009-09-03	Analyzed By:	MD
Prep Batch:	54173	Sample Preparation:	2009-09-03	Prepared By:	MD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Dissolved Solids		**7700**	**7700**	<5.00	mg/L	1	5.00		5

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory:	Lubbock				
Analysis:	TKN	Analytical Method:	E 351.3	Prep Method:	N/A
QC Batch:	63441	Date Analyzed:	2009-09-09	Analyzed By:	AH
Prep Batch:	54150	Sample Preparation:	2009-09-09	Prepared By:	AH

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Kjeldahl Nitrogen - N	*J*	**3.36**	<10.0	<2.45	mg/L	1	2.45	10	2.45

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory:	Lubbock				
Analysis:	Tl, Total	Analytical Method:	S 6010B	Prep Method:	S 3010A
QC Batch:	63374	Date Analyzed:	2009-09-09	Analyzed By:	RR
Prep Batch:	54079	Sample Preparation:	2009-09-09	Prepared By:	KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Thallium	*U*	<0.00488	<0.0500	<0.00488	mg/L	1	0.00488	0.05	0.00488

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory:	Lubbock				
Analysis:	TOC	Analytical Method:	SM 5310C	Prep Method:	N/A
QC Batch:	63340	Date Analyzed:	2009-09-08	Analyzed By:	KV
Prep Batch:	54065	Sample Preparation:	2009-09-08	Prepared By:	KV

continued . . .

sample 209097 continued ...

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Organic Carbon		**2.19**	**2.19**	<0.401	mg/L	1	0.401	1	0.401

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory: Lubbock
Analysis: TPH DRO — Analytical Method: Mod. 8015B — Prep Method: N/A
QC Batch: 63307 — Date Analyzed: 2009-09-07 — Analyzed By:
Prep Batch: 54035 — Sample Preparation: 2009-09-04 — Prepared By:

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	U	<0.876	<5.00	<0.876	mg/L	1	0.876	5	0.876

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		9.51	mg/L	1	10.0	95	57.3 - 151

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory: Lubbock
Analysis: TPH GRO — Analytical Method: S 8015B — Prep Method: S 5030B
QC Batch: 63239 — Date Analyzed: 2009-09-03 — Analyzed By: ER
Prep Batch: 53976 — Sample Preparation: 2009-09-03 — Prepared By: ER

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO	U	<0.152	<0.200	<0.152	mg/L	1	0.152	0.2	0.152

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.108	mg/L	1	0.100	108	70.8 - 112
4-Bromofluorobenzene (4-BFB)		0.106	mg/L	1	0.100	106	80 - 109

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory: Lubbock

Analysis: V, Total Analytical Method: S 6010B Prep Method: S 3010A
QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 Sample Preparation: 2009-09-09 Prepared By: KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Vanadium		**0.0270**	**0.0270**	<0.000426	mg/L	1	0.000426	0.005	0.000426

Sample: 209097 - HLSF-0143-HMW-013-0909

Laboratory: Lubbock
Analysis: Zn, Total Analytical Method: S 6010B Prep Method: S 3010A
QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 Sample Preparation: 2009-09-09 Prepared By: KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Zinc		**0.0610**	**0.0610**	<0.000465	mg/L	1	0.000465	0.005	0.000465

Method Blank (1)

QC Batch: 63239 Date Analyzed: 2009-09-03 Analyzed By: ER
Prep Batch: 53976 QC Preparation: 2009-09-03 Prepared By: ER

Parameter	Flag	Result	Units	Reporting Limits
GRO		<0.152	mg/L	0.152

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.103	mg/L	1	0.100	103	70.8 - 112
4-Bromofluorobenzene (4-BFB)		0.100	mg/L	1	0.100	100	80 - 109

Method Blank (1)

QC Batch: 63280 Date Analyzed: 2009-09-04 Analyzed By: TP
Prep Batch: 54009 QC Preparation: 2009-09-04 Prepared By: TP

Parameter	Flag	Result	Units	Reporting Limits
Total Mercury		<0.0000329	mg/L	3.29e-05

Method Blank (1)

QC Batch: 63307 Date Analyzed: 2009-09-07 Analyzed By:
Prep Batch: 54035 QC Preparation: 2009-09-04 Prepared By:

Parameter	Flag	Result	Units	Reporting Limits
DRO		<0.876	mg/L	0.876

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		8.25	mg/L	1	10.0	82	57.3 - 151

Method Blank (1)

QC Batch: 63330 Date Analyzed: 2009-09-02 Analyzed By: MD
Prep Batch: 54057 QC Preparation: 2009-09-02 Prepared By: MD

Parameter	Flag	Result	Units	Reporting Limits
Hexavalent Chromium		<0.00594	mg/L	0.00594

Method Blank (1)

QC Batch: 63340 Date Analyzed: 2009-09-08 Analyzed By: KV
Prep Batch: 54065 QC Preparation: 2009-09-08 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Organic Carbon		0.848	mg/L	0.401

Method Blank (1)

QC Batch: 63370 Date Analyzed: 2009-09-05 Analyzed By: AH
Prep Batch: 54092 QC Preparation: 2009-09-05 Prepared By: AH

Parameter	Flag	Result	Units	Reporting Limits
Ammonia-N		<0.353	mg/L	0.353

Method Blank (1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Silver		<0.00111	mg/L	0.00111

Method Blank (1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Aluminum		<0.00301	mg/L	0.00301

Method Blank (1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Arsenic		<0.00448	mg/L	0.00448

Method Blank (1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Barium		<0.00105	mg/L	0.00105

Method Blank (1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Beryllium		<0.000450	mg/L	0.00045

Method Blank (1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Cadmium		<0.000303	mg/L	0.000303

Method Blank (1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Cobalt		<0.000822	mg/L	0.000822

Method Blank (1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Chromium		<0.000583	mg/L	0.000583

Method Blank (1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Copper		<0.000843	mg/L	0.000843

Method Blank (1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Iron		<0.000872	mg/L	0.000872

Method Blank (1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Manganese		<0.000305	mg/L	0.000305

Method Blank (1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Molybdenum		<0.00119	mg/L	0.00119

Method Blank (1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Nickel		<0.00121	mg/L	0.00121

Method Blank (1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Phosphorous		<0.00289	mg/L	0.00289

Method Blank (1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Lead		<0.00326	mg/L	0.00326

Method Blank (1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Antimony		<0.00440	mg/L	0.0044

Method Blank (1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Selenium		<0.00508	mg/L	0.00508

Method Blank (1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Thallium		<0.00488	mg/L	0.00488

Method Blank (1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Vanadium		<0.000426	mg/L	0.000426

Method Blank (1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Zinc		<0.000465	mg/L	0.000465

Method Blank (1)

QC Batch: 63441 Date Analyzed: 2009-09-09 Analyzed By: AH
Prep Batch: 54150 QC Preparation: 2009-09-09 Prepared By: AH

Parameter	Flag	Result	Units	Reporting Limits
Total Kjeldahl Nitrogen - N		<2.45	mg/L	2.45

Method Blank (1)

QC Batch: 63462 Date Analyzed: 2009-09-11 Analyzed By: RR
Prep Batch: 54154 QC Preparation: 2009-09-11 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Dissolved Chromium		<0.000583	mg/L	0.000583

Method Blank (1)

QC Batch: 63473 Date Analyzed: 2009-09-03 Analyzed By: MD
Prep Batch: 54173 QC Preparation: 2009-09-03 Prepared By: MD

Parameter	Flag	Result	Units	Reporting Limits
Total Dissolved Solids		<5.00	mg/L	5

Method Blank (1)

QC Batch: 63527 Date Analyzed: 2009-09-10 Analyzed By: JG
Prep Batch: 54231 QC Preparation: 2009-09-10 Prepared By: JG

Parameter	Flag	Result	Units	Reporting Limits
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1
Bicarbonate Alkalinity		<4.00	mg/L as CaCo3	4
Total Alkalinity		<4.00	mg/L as CaCo3	4

Method Blank (1)

QC Batch: 63545 Date Analyzed: 2009-09-15 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Calcium		<0.117	mg/L	0.117

Method Blank (1)

QC Batch: 63545 Date Analyzed: 2009-09-15 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Potassium		<0.172	mg/L	0.172

Method Blank (1)

QC Batch: 63545 Date Analyzed: 2009-09-15 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Magnesium		<0.160	mg/L	0.16

Method Blank (1)

QC Batch: 63545 Date Analyzed: 2009-09-15 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Sodium		<0.0500	mg/L	0.05

Method Blank (1)

QC Batch: 63672 Date Analyzed: 2009-09-03 Analyzed By: JR
Prep Batch: 54360 QC Preparation: 2009-09-03 Prepared By: JR

Parameter	Flag	Result	Units	Reporting Limits
Bromide		<0.0394	mg/L	0.0394

Method Blank (1)

QC Batch: 63672 Date Analyzed: 2009-09-03 Analyzed By: JR
Prep Batch: 54360 QC Preparation: 2009-09-03 Prepared By: JR

Parameter	Flag	Result	Units	Reporting Limits
Chloride		<0.640	mg/L	0.6404

Method Blank (1)

QC Batch: 63672 Date Analyzed: 2009-09-03 Analyzed By: JR
Prep Batch: 54360 QC Preparation: 2009-09-03 Prepared By: JR

Parameter	Flag	Result	Units	Reporting Limits
Fluoride		<0.0434	mg/L	0.0434

Method Blank (1)

QC Batch: 63672 Date Analyzed: 2009-09-03 Analyzed By: JR
Prep Batch: 54360 QC Preparation: 2009-09-03 Prepared By: JR

Parameter	Flag	Result	Units	Reporting Limits
Sulfate		<0.504	mg/L	0.5038

Method Blank (1)

QC Batch: 63681 Date Analyzed: 2009-09-17 Analyzed By: KV
Prep Batch: 54370 QC Preparation: 2009-09-17 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Nitrate and Nitrite as N		<0.0350	mg/L	0.035

Method Blank (1)

QC Batch: 63699 Date Analyzed: 2009-09-17 Analyzed By: JR
Prep Batch: 54391 QC Preparation: 2009-09-17 Prepared By: MD

Parameter	Flag	Result	Units	Reporting Limits
Oil and Grease		<3.60	mg/L	3.6

Duplicate (1) Duplicated Sample: 209099

QC Batch: 63341 Date Analyzed: 2009-09-02 Analyzed By: JG
Prep Batch: 54064 QC Preparation: 2009-09-02 Prepared By: JG

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
pH	6.94	6.94	s.u.	1	0	1.1

Duplicate (1) Duplicated Sample: 208953

QC Batch: 63473 Date Analyzed: 2009-09-03 Analyzed By: MD
Prep Batch: 54173 QC Preparation: 2009-09-03 Prepared By: MD

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	28800	29500	mg/L	1	2	10

Duplicate (1) Duplicated Sample: 208953

QC Batch: 63527 Date Analyzed: 2009-09-10 Analyzed By: JG
Prep Batch: 54231 QC Preparation: 2009-09-10 Prepared By: JG

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Hydroxide Alkalinity	<1.00	<1.00	mg/L as CaCo3	1	0	20
Carbonate Alkalinity	<1.00	<1.00	mg/L as CaCo3	1	0	20
Bicarbonate Alkalinity	262	260	mg/L as CaCo3	1	1	20
Total Alkalinity	262	260	mg/L as CaCo3	1	1	20

Laboratory Control Spike (LCS-1)

QC Batch: 63239 Date Analyzed: 2009-09-03 Analyzed By: ER
Prep Batch: 53976 QC Preparation: 2009-09-03 Prepared By: ER

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	1.08	mg/L	1	1.00	<0.152	108	75.5 - 118

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	1.05	mg/L	1	1.00	<0.152	105	75.5 - 118	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.109	0.104	mg/L	1	0.100	109	104	78.2 - 121
4-Bromofluorobenzene (4-BFB)	0.106	0.104	mg/L	1	0.100	106	104	82.2 - 118

Laboratory Control Spike (LCS-1)

QC Batch: 63280 Date Analyzed: 2009-09-04 Analyzed By: TP
Prep Batch: 54009 QC Preparation: 2009-09-04 Prepared By: TP

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Mercury	0.00103	mg/L	1	0.00100	<0.0000329	103	90.3 - 108

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Mercury	0.00104	mg/L	1	0.00100	<0.0000329	104	90.3 - 108	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 63307 Date Analyzed: 2009-09-07 Analyzed By:
Prep Batch: 54035 QC Preparation: 2009-09-04 Prepared By:

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	27.0	mg/L	1	25.0	<0.876	108	78.6 - 154

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	28.3	mg/L	1	25.0	<0.876	113	78.6 - 154	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Triacontane	8.66	8.90	mg/L	1	10.0	87	89	57.3 - 151

Laboratory Control Spike (LCS-1)

QC Batch: 63330 Date Analyzed: 2009-09-02 Analyzed By: MD
Prep Batch: 54057 QC Preparation: 2009-09-02 Prepared By: MD

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Hexavalent Chromium	0.515	mg/L	1	0.500	<0.00594	103	95.4 - 105

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Hexavalent Chromium	0.506	mg/L	1	0.500	<0.00594	101	95.4 - 105	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 63340 Date Analyzed: 2009-09-08 Analyzed By: KV
Prep Batch: 54065 QC Preparation: 2009-09-08 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Organic Carbon	48.4	mg/L	1	50.0	<0.401	97	89.5 - 114

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Organic Carbon	49.4	mg/L	1	50.0	<0.401	99	89.5 - 114	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Silver	0.128	mg/L	1	0.125	<0.00111	102	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Silver	0.125	mg/L	1	0.125	<0.00111	100	85 - 115	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Aluminum	0.989	mg/L	1	1.00	<0.00301	99	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Aluminum	0.970	mg/L	1	1.00	<0.00301	97	85 - 115	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Arsenic	0.506	mg/L	1	0.500	<0.00448	101	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Arsenic	0.493	mg/L	1	0.500	<0.00448	99	85 - 115	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Barium	1.05	mg/L	1	1.00	<0.00105	105	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Barium	1.04	mg/L	1	1.00	<0.00105	104	85 - 115	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Beryllium	0.0260	mg/L	1	0.0250	<0.000450	104	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Beryllium	0.0250	mg/L	1	0.0250	<0.000450	100	85 - 115	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Cadmium	0.263	mg/L	1	0.250	<0.000303	105	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Cadmium	0.258	mg/L	1	0.250	<0.000303	103	85 - 115	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Cobalt	0.254	mg/L	1	0.250	<0.000822	102	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Cobalt	0.251	mg/L	1	0.250	<0.000822	100	85 - 115	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Chromium	0.102	mg/L	1	0.100	<0.000583	102	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Chromium	0.0990	mg/L	1	0.100	<0.000583	99	85 - 115	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Copper	0.130	mg/L	1	0.125	<0.000843	104	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Copper	0.127	mg/L	1	0.125	<0.000843	102	85 - 115	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Iron	0.523	mg/L	1	0.500	<0.000872	105	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Iron	0.515	mg/L	1	0.500	<0.000872	103	85 - 115	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Manganese	0.264	mg/L	1	0.250	<0.000305	106	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Manganese	0.259	mg/L	1	0.250	<0.000305	104	85 - 115	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Molybdenum	0.552	mg/L	1	0.500	<0.00119	110	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Molybdenum	0.543	mg/L	1	0.500	<0.00119	109	85 - 115	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Nickel	0.263	mg/L	1	0.250	<0.00121	105	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Nickel	0.257	mg/L	1	0.250	<0.00121	103	85 - 115	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Phosphorous	0.495	mg/L	1	0.500	<0.00289	99	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Phosphorous	0.481	mg/L	1	0.500	<0.00289	96	85 - 115	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Lead	0.507	mg/L	1	0.500	<0.00326	101	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Lead	0.492	mg/L	1	0.500	<0.00326	98	85 - 115	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Antimony	0.245	mg/L	1	0.250	<0.00440	98	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Antimony	0.244	mg/L	1	0.250	<0.00440	98	85 - 115	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Selenium	0.457	mg/L	1	0.500	<0.00508	91	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Selenium	0.447	mg/L	1	0.500	<0.00508	89	85 - 115	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Thallium	0.522	mg/L	1	0.500	<0.00488	104	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Thallium	0.510	mg/L	1	0.500	<0.00488	102	85 - 115	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Vanadium	0.252	mg/L	1	0.250	<0.000426	101	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Vanadium	0.248	mg/L	1	0.250	<0.000426	99	85 - 115	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Zinc	0.233	mg/L	1	0.250	<0.000465	93	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Zinc	0.230	mg/L	1	0.250	<0.000465	92	85 - 115	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 63462 Date Analyzed: 2009-09-11 Analyzed By: RR
Prep Batch: 54154 QC Preparation: 2009-09-11 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Dissolved Chromium	0.100	mg/L	1	0.100	<0.000583	100	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Dissolved Chromium	0.101	mg/L	1	0.100	<0.000583	101	85 - 115	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 63545 Date Analyzed: 2009-09-15 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Calcium	54.9	mg/L	1	50.0	<0.117	110	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Calcium	53.0	mg/L	1	50.0	<0.117	106	85 - 115	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 63545 Date Analyzed: 2009-09-15 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Potassium	54.0	mg/L	1	50.0	<0.172	108	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Potassium	52.1	mg/L	1	50.0	<0.172	104	85 - 115	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 63545 Date Analyzed: 2009-09-15 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Magnesium	52.3	mg/L	1	50.0	<0.160	105	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Magnesium	50.1	mg/L	1	50.0	<0.160	100	85 - 115	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 63545 Date Analyzed: 2009-09-15 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Sodium	55.4	mg/L	1	50.0	<0.0500	111	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Sodium	52.9	mg/L	1	50.0	<0.0500	106	85 - 115	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 63672 Date Analyzed: 2009-09-03 Analyzed By: JR
Prep Batch: 54360 QC Preparation: 2009-09-03 Prepared By: JR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Bromide	4.84	mg/L	1	5.00	<0.0394	97	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Bromide	4.66	mg/L	1	5.00	<0.0394	93	90 - 110	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 63672 Date Analyzed: 2009-09-03 Analyzed By: JR
Prep Batch: 54360 QC Preparation: 2009-09-03 Prepared By: JR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	24.5	mg/L	1	25.0	<0.640	98	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	23.5	mg/L	1	25.0	<0.640	94	90 - 110	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 63672 Date Analyzed: 2009-09-03 Analyzed By: JR
Prep Batch: 54360 QC Preparation: 2009-09-03 Prepared By: JR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Fluoride	4.81	mg/L	1	5.00	<0.0434	96	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Fluoride	4.60	mg/L	1	5.00	<0.0434	92	90 - 110	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 63672 Date Analyzed: 2009-09-03 Analyzed By: JR
Prep Batch: 54360 QC Preparation: 2009-09-03 Prepared By: JR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Sulfate	24.2	mg/L	1	25.0	<0.504	97	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Sulfate	23.1	mg/L	1	25.0	<0.504	92	90 - 110	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 63699 Date Analyzed: 2009-09-17 Analyzed By: JR
Prep Batch: 54391 QC Preparation: 2009-09-17 Prepared By: MD

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Oil and Grease	39.5	mg/L	1	40.0	<3.60	99	78 - 114

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Oil and Grease	35.2	mg/L	1	40.0	<3.60	88	78 - 114	12	18

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 209098

QC Batch: 63239 Date Analyzed: 2009-09-03 Analyzed By: ER
Prep Batch: 53976 QC Preparation: 2009-09-03 Prepared By: ER

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	1.11	mg/L	1	1.00	<0.152	111	48.4 - 136

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO [1]	0.768	mg/L	1	1.00	<0.152	77	48.4 - 136	36	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT) [2]	0.112	0.0584	mg/L	1	0.1	112	58	70.3 - 129
4-Bromofluorobenzene (4-BFB) [3]	0.111	0.0576	mg/L	1	0.1	111	58	82.5 - 118

Matrix Spike (MS-1) Spiked Sample: 209098

QC Batch: 63280 Date Analyzed: 2009-09-04 Analyzed By: TP
Prep Batch: 54009 QC Preparation: 2009-09-04 Prepared By: TP

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Mercury	0.000980	mg/L	1	0.00100	<0.0000329	98	80 - 116

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

[1] MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.
[2] Matrix spike recovery out of control limits. Use LCS/LCSD to demonstrate analysis is under control.
[3] Matrix spike recovery out of control limits. Use LCS/LCSD to demonstrate analysis is under control.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Mercury	0.000970	mg/L	1	0.00100	<0.0000329	97	80 - 116	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 208666

QC Batch: 63307 Date Analyzed: 2009-09-07 Analyzed By:
Prep Batch: 54035 QC Preparation: 2009-09-04 Prepared By:

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	24.3	mg/L	1	25.0	<0.876	97	54 - 144

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	23.5	mg/L	1	25.0	<0.876	94	54 - 144	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Triacontane	10.9	10.9	mg/L	1	10	109	109	57.3 - 151

Matrix Spike (MS-1) Spiked Sample: 209099

QC Batch: 63330 Date Analyzed: 2009-09-02 Analyzed By: MD
Prep Batch: 54057 QC Preparation: 2009-09-02 Prepared By: MD

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Hexavalent Chromium	0.560	mg/L	1.11	0.556	<0.00659	101	80.1 - 118

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Hexavalent Chromium	0.566	mg/L	1.11	0.556	<0.00659	102	80.1 - 118	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 208408

QC Batch: 63340 Date Analyzed: 2009-09-08 Analyzed By: KV
Prep Batch: 54065 QC Preparation: 2009-09-08 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Organic Carbon	51.2	mg/L	1	50.0	1.66	99	66.9 - 121

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Organic Carbon	48.4	mg/L	1	50.0	1.66	93	66.9 - 121	6	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 209099

QC Batch: 63370 Date Analyzed: 2009-09-05 Analyzed By: AH
Prep Batch: 54092 QC Preparation: 2009-09-05 Prepared By: AH

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Ammonia-N	5.38	mg/L	1	5.00	0.504	98	57.2 - 133

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Ammonia-N	5.26	mg/L	1	5.00	0.504	95	57.2 - 133	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 209096

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Silver	0.120	mg/L	1	0.125	<0.00111	96	75 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Silver	0.118	mg/L	1	0.125	<0.00111	94	75 - 125	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 209096

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Aluminum	1.26	mg/L	1	1.00	0.151	111	75 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Aluminum	1.24	mg/L	1	1.00	0.151	109	75 - 125	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 209096

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Arsenic	0.509	mg/L	1	0.500	0.061	90	75 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Arsenic	0.500	mg/L	1	0.500	0.061	88	75 - 125	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 209096

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Barium	0.835	mg/L	1	1.00	0.012	82	75 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Barium	0.816	mg/L	1	1.00	0.012	80	75 - 125	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 209096

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Beryllium	0.0210	mg/L	1	0.0250	<0.000450	84	75 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Beryllium	0.0210	mg/L	1	0.0250	<0.000450	84	75 - 125	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 209096

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Cadmium	0.213	mg/L	1	0.250	<0.000303	85	75 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Cadmium	0.199	mg/L	1	0.250	<0.000303	80	75 - 125	7	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 209096

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Cobalt	0.200	mg/L	1	0.250	<0.000822	80	75 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Cobalt	0.197	mg/L	1	0.250	<0.000822	79	75 - 125	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 209096

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Chromium	0.0810	mg/L	1	0.100	<0.000583	81	75 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Chromium	0.0790	mg/L	1	0.100	<0.000583	79	75 - 125	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 209096

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Copper	0.118	mg/L	1	0.125	<0.000843	94	75 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Copper	0.117	mg/L	1	0.125	<0.000843	94	75 - 125	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 209096

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Iron	1.42	mg/L	1	0.500	1.01	82	75 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Iron	1.43	mg/L	1	0.500	1.01	84	75 - 125	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 209096

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Manganese	0.452	mg/L	1	0.250	0.257	78	75 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Manganese	0.451	mg/L	1	0.250	0.257	78	75 - 125	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 209096

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Molybdenum	0.472	mg/L	1	0.500	0.036	87	75 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Molybdenum	0.463	mg/L	1	0.500	0.036	85	75 - 125	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 209096

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Nickel	0.207	mg/L	1	0.250	0.013	78	75 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Nickel	0.212	mg/L	1	0.250	0.013	80	75 - 125	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 209096

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Phosphorous	0.496	mg/L	1	0.500	0.058	88	75 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Phosphorous	0.486	mg/L	1	0.500	0.058	86	75 - 125	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 209096

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Lead	0.464	mg/L	1	0.500	<0.00326	93	75 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Lead	0.453	mg/L	1	0.500	<0.00326	91	75 - 125	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 209096

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Antimony	0.235	mg/L	1	0.250	<0.00440	94	75 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Antimony	0.220	mg/L	1	0.250	<0.00440	88	75 - 125	7	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 209096

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Selenium	0.423	mg/L	1	0.500	<0.00508	85	75 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Selenium	0.428	mg/L	1	0.500	<0.00508	86	75 - 125	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 209096

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Thallium	0.389	mg/L	1	0.500	<0.00488	78	75 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Thallium	0.385	mg/L	1	0.500	<0.00488	77	75 - 125	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 209096

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Vanadium	0.223	mg/L	1	0.250	0.013	84	75 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Vanadium	0.213	mg/L	1	0.250	0.013	80	75 - 125	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 209096

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Zinc	0.201	mg/L	1	0.250	<0.000465	80	75 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Zinc	0.220	mg/L	1	0.250	<0.000465	88	75 - 125	9	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 209230

QC Batch: 63441 Date Analyzed: 2009-09-09 Analyzed By: AH
Prep Batch: 54150 QC Preparation: 2009-09-09 Prepared By: AH

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Kjeldahl Nitrogen - N	44.5	mg/L	1	50.0	2.52	84	61.2 - 118

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Kjeldahl Nitrogen - N	46.2	mg/L	1	50.0	2.52	87	61.2 - 118	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 209097

QC Batch: 63462 Date Analyzed: 2009-09-11 Analyzed By: RR
Prep Batch: 54154 QC Preparation: 2009-09-11 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Dissolved Chromium	0.0990	mg/L	1	0.100	0.003	96	75 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Dissolved Chromium	0.0990	mg/L	1	0.100	0.003	96	75 - 125	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 209096

QC Batch: 63545 Date Analyzed: 2009-09-15 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Calcium	269	mg/L	10	50.0	212	114	75 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Calcium	264	mg/L	10	50.0	212	104	75 - 125	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 209096

QC Batch: 63545 Date Analyzed: 2009-09-15 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Potassium	142	mg/L	1	50.0	94.5	95	75 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Potassium	152	mg/L	1	50.0	94.5	115	75 - 125	7	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 209096

QC Batch: 63545 Date Analyzed: 2009-09-15 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Magnesium	594	mg/L	10	50.0	542	104	75 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Magnesium	602	mg/L	10	50.0	542	120	75 - 125	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 209096

QC Batch: 63545 Date Analyzed: 2009-09-15 Analyzed By: RR
Prep Batch: 54079 QC Preparation: 2009-09-09 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Sodium	2500	mg/L	100	50.0	2450	100	75 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Sodium	2490	mg/L	100	50.0	2450	80	75 - 125	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 209096

QC Batch: 63672 Date Analyzed: 2009-09-03 Analyzed By: JR
Prep Batch: 54360 QC Preparation: 2009-09-03 Prepared By: JR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Bromide	2710	mg/L	556	2780	<21.9	97	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Bromide	2710	mg/L	556	2780	<21.9	97	90 - 110	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 209096

QC Batch: 63672 Date Analyzed: 2009-09-03 Analyzed By: JR
Prep Batch: 54360 QC Preparation: 2009-09-03 Prepared By: JR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	14600	mg/L	556	13900	795	99	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	14600	mg/L	556	13900	795	99	90 - 110	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 209096

QC Batch: 63672 Date Analyzed: 2009-09-03 Analyzed By: JR
Prep Batch: 54360 QC Preparation: 2009-09-03 Prepared By: JR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Fluoride	2690	mg/L	556	2780	<24.1	97	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Fluoride	2680	mg/L	556	2780	<24.1	96	90 - 110	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 209096

QC Batch: 63672 Date Analyzed: 2009-09-03 Analyzed By: JR
Prep Batch: 54360 QC Preparation: 2009-09-03 Prepared By: JR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Sulfate	17600	mg/L	556	13900	3790	99	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Sulfate	17500	mg/L	556	13900	3790	99	90 - 110	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 209096

QC Batch: 63681 Date Analyzed: 2009-09-17 Analyzed By: KV
Prep Batch: 54370 QC Preparation: 2009-09-17 Prepared By: KV

Param		MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Nitrate and Nitrite as N	[4]	0.183	mg/L	2	0.200	0.124	30	80 - 120

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param		MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Nitrate and Nitrite as N	[5]	0.192	mg/L	2	0.200	0.124	34	80 - 120	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Standard (CCV-1)

QC Batch: 63239 Date Analyzed: 2009-09-03 Analyzed By: ER

[4] Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.
[5] Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	1.07	107	80 - 120	2009-09-03

Standard (CCV-2)

QC Batch: 63239 Date Analyzed: 2009-09-03 Analyzed By: ER

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	1.02	102	80 - 120	2009-09-03

Standard (ICV-1)

QC Batch: 63280 Date Analyzed: 2009-09-04 Analyzed By: TP

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.00100	0.00108	108	90 - 110	2009-09-04

Standard (CCV-1)

QC Batch: 63280 Date Analyzed: 2009-09-04 Analyzed By: TP

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.00100	0.00104	104	90 - 110	2009-09-04

Standard (CCV-1)

QC Batch: 63307 Date Analyzed: 2009-09-07 Analyzed By:

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/L	250	286	114	80 - 120	2009-09-07

Standard (CCV-2)

QC Batch: 63307 Date Analyzed: 2009-09-07 Analyzed By:

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/L	250	262	105	80 - 120	2009-09-07

Standard (CCV-1)

QC Batch: 63330 Date Analyzed: 2009-09-02 Analyzed By: MD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hexavalent Chromium		mg/L	0.500	0.505	101	90 - 110	2009-09-02

Standard (CCV-2)

QC Batch: 63330 Date Analyzed: 2009-09-02 Analyzed By: MD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hexavalent Chromium		mg/L	0.500	0.508	102	90 - 110	2009-09-02

Standard (CCV-2)

QC Batch: 63340 Date Analyzed: 2009-09-08 Analyzed By: KV

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Organic Carbon		mg/L	50.0	49.8	100	80 - 120	2009-09-08

Standard (CCV-3)

QC Batch: 63340 Date Analyzed: 2009-09-08 Analyzed By: KV

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Organic Carbon		mg/L	50.0	49.0	98	80 - 120	2009-09-08

Standard (ICV-1)

QC Batch: 63341 Date Analyzed: 2009-09-02 Analyzed By: JG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
pH		s.u.	7.00	7.01	100	98 - 102	2009-09-02

Standard (CCV-1)

QC Batch: 63341 Date Analyzed: 2009-09-02 Analyzed By: JG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
pH		s.u.	7.00	7.00	100	98 - 102	2009-09-02

Standard (ICV-1)

QC Batch: 63370 Date Analyzed: 2009-09-05 Analyzed By: AH

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Ammonia-N		mg/L	5.00	4.93	99	85 - 115	2009-09-05

Standard (CCV-1)

QC Batch: 63370 Date Analyzed: 2009-09-05 Analyzed By: AH

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Ammonia-N		mg/L	5.00	4.98	100	85 - 115	2009-09-05

Standard (ICV-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Silver		mg/L	0.250	0.254	102	90 - 110	2009-09-09

Standard (ICV-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Aluminum		mg/L	1.00	1.02	102	90 - 110	2009-09-09

Standard (ICV-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Arsenic		mg/L	2.00	2.02	101	90 - 110	2009-09-09

Standard (ICV-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Barium		mg/L	1.00	1.03	103	90 - 110	2009-09-09

Standard (ICV-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Beryllium		mg/L	1.00	1.01	101	90 - 110	2009-09-09

Standard (ICV-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Cadmium		mg/L	1.00	1.05	105	90 - 110	2009-09-09

Standard (ICV-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Cobalt		mg/L	1.00	0.994	99	90 - 110	2009-09-09

Standard (ICV-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Chromium		mg/L	1.00	1.04	104	90 - 110	2009-09-09

Standard (ICV-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Copper		mg/L	1.00	1.02	102	90 - 110	2009-09-09

Standard (ICV-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Iron		mg/L	1.00	1.04	104	90 - 110	2009-09-09

Standard (ICV-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Manganese		mg/L	1.00	0.999	100	90 - 110	2009-09-09

Standard (ICV-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Molybdenum		mg/L	1.00	1.01	101	90 - 110	2009-09-09

Standard (ICV-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Nickel		mg/L	1.00	1.00	100	90 - 110	2009-09-09

Standard (ICV-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Phosphorous		mg/L	5.00	4.97	99	90 - 110	2009-09-09

Standard (ICV-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Lead		mg/L	2.00	2.08	104	90 - 110	2009-09-09

Standard (ICV-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Antimony		mg/L	2.00	2.04	102	90 - 110	2009-09-09

Standard (ICV-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Selenium		mg/L	1.00	1.03	103	90 - 110	2009-09-09

Standard (ICV-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Thallium		mg/L	5.00	5.14	103	90 - 110	2009-09-09

Standard (ICV-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Vanadium		mg/L	1.00	1.05	105	90 - 110	2009-09-09

Standard (ICV-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Zinc		mg/L	1.00	1.02	102	90 - 110	2009-09-09

Standard (CCV-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Silver		mg/L	0.125	0.127	102	90 - 110	2009-09-09

Standard (CCV-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Aluminum		mg/L	1.00	0.993	99	90 - 110	2009-09-09

Standard (CCV-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Arsenic		mg/L	1.00	1.02	102	90 - 110	2009-09-09

Standard (CCV-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Barium		mg/L	1.00	1.02	102	90 - 110	2009-09-09

Standard (CCV-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Beryllium		mg/L	1.00	1.00	100	90 - 110	2009-09-09

Standard (CCV-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Cadmium		mg/L	1.00	1.04	104	90 - 110	2009-09-09

Standard (CCV-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Cobalt		mg/L	1.00	1.00	100	90 - 110	2009-09-09

Standard (CCV-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Chromium		mg/L	1.00	1.02	102	90 - 110	2009-09-09

Standard (CCV-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Copper		mg/L	1.00	1.00	100	90 - 110	2009-09-09

Standard (CCV-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Iron		mg/L	1.00	1.02	102	90 - 110	2009-09-09

Standard (CCV-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Manganese		mg/L	1.00	1.01	101	90 - 110	2009-09-09

Standard (CCV-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Molybdenum		mg/L	1.00	0.989	99	90 - 110	2009-09-09

Standard (CCV-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Nickel		mg/L	1.00	0.993	99	90 - 110	2009-09-09

Standard (CCV-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Phosphorous		mg/L	5.00	4.99	100	90 - 110	2009-09-09

Standard (CCV-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Lead		mg/L	1.00	1.01	101	90 - 110	2009-09-09

Standard (CCV-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Antimony		mg/L	1.00	0.997	100	90 - 110	2009-09-09

Standard (CCV-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Selenium		mg/L	1.00	1.01	101	90 - 110	2009-09-09

Standard (CCV-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Thallium		mg/L	1.00	1.02	102	90 - 110	2009-09-09

Standard (CCV-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Vanadium		mg/L	1.00	1.04	104	90 - 110	2009-09-09

Standard (CCV-1)

QC Batch: 63374 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Zinc		mg/L	1.00	1.02	102	90 - 110	2009-09-09

Standard (ICV-1)

QC Batch: 63441 Date Analyzed: 2009-09-09 Analyzed By: AH

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Kjeldahl Nitrogen - N		mg/L	5.00	5.21	104	85 - 115	2009-09-09

Standard (CCV-1)

QC Batch: 63441 Date Analyzed: 2009-09-09 Analyzed By: AH

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Kjeldahl Nitrogen - N		mg/L	5.00	4.93	99	85 - 115	2009-09-09

Standard (ICV-1)

QC Batch: 63462 Date Analyzed: 2009-09-11 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Chromium		mg/L	1.00	1.03	103	90 - 110	2009-09-11

Standard (CCV-1)

QC Batch: 63462 Date Analyzed: 2009-09-11 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Chromium		mg/L	1.00	1.02	102	90 - 110	2009-09-11

Standard (ICV-1)

QC Batch: 63473 Date Analyzed: 2009-09-03 Analyzed By: MD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	994	99	90 - 110	2009-09-03

Standard (CCV-1)

QC Batch: 63473 Date Analyzed: 2009-09-03 Analyzed By: MD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	989	99	90 - 110	2009-09-03

Standard (ICV-1)

QC Batch: 63527 Date Analyzed: 2009-09-10 Analyzed By: JG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0.00	<1.00		90 - 110	2009-09-10
Carbonate Alkalinity		mg/L as CaCo3	0.00	240		90 - 110	2009-09-10
Bicarbonate Alkalinity		mg/L as CaCo3	0.00	10.0		90 - 110	2009-09-10
Total Alkalinity		mg/L as CaCo3	250	250	100	90 - 110	2009-09-10

Standard (CCV-1)

QC Batch: 63527 Date Analyzed: 2009-09-10 Analyzed By: JG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0.00	<1.00		90 - 110	2009-09-10
Carbonate Alkalinity		mg/L as CaCo3	0.00	240		90 - 110	2009-09-10
Bicarbonate Alkalinity		mg/L as CaCo3	0.00	10.0		90 - 110	2009-09-10
Total Alkalinity		mg/L as CaCo3	250	250	100	90 - 110	2009-09-10

Standard (ICV-1)

QC Batch: 63545 Date Analyzed: 2009-09-15 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Calcium		mg/L	50.0	50.7	101	90 - 110	2009-09-15

Standard (ICV-1)

QC Batch: 63545 Date Analyzed: 2009-09-15 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Potassium		mg/L	50.0	51.7	103	90 - 110	2009-09-15

Standard (ICV-1)

QC Batch: 63545 Date Analyzed: 2009-09-15 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Magnesium		mg/L	50.0	52.4	105	90 - 110	2009-09-15

Standard (ICV-1)

QC Batch: 63545 Date Analyzed: 2009-09-15 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Sodium		mg/L	50.0	51.6	103	90 - 110	2009-09-15

Standard (CCV-1)

QC Batch: 63545 Date Analyzed: 2009-09-15 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Calcium		mg/L	50.0	48.9	98	90 - 110	2009-09-15

Standard (CCV-1)

QC Batch: 63545 Date Analyzed: 2009-09-15 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Potassium		mg/L	50.0	50.6	101	90 - 110	2009-09-15

Standard (CCV-1)

QC Batch: 63545 Date Analyzed: 2009-09-15 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Magnesium		mg/L	50.0	49.2	98	90 - 110	2009-09-15

Standard (CCV-1)

QC Batch: 63545 Date Analyzed: 2009-09-15 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Sodium		mg/L	50.0	50.2	100	90 - 110	2009-09-15

Standard (CCV-1)

QC Batch: 63672 Date Analyzed: 2009-09-03 Analyzed By: JR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromide		mg/L	5.00	4.56	91	90 - 110	2009-09-03

Standard (CCV-1)

QC Batch: 63672 Date Analyzed: 2009-09-03 Analyzed By: JR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	25.0	23.1	92	90 - 110	2009-09-03

Standard (CCV-1)

QC Batch: 63672 Date Analyzed: 2009-09-03 Analyzed By: JR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Fluoride		mg/L	5.00	4.55	91	90 - 110	2009-09-03

Standard (CCV-1)

QC Batch: 63672 Date Analyzed: 2009-09-03 Analyzed By: JR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Sulfate		mg/L	25.0	22.7	91	90 - 110	2009-09-03

Standard (CCV-2)

QC Batch: 63672 Date Analyzed: 2009-09-03 Analyzed By: JR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromide		mg/L	5.00	4.54	91	90 - 110	2009-09-03

Standard (CCV-2)

QC Batch: 63672 Date Analyzed: 2009-09-03 Analyzed By: JR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	25.0	23.0	92	90 - 110	2009-09-03

Standard (CCV-2)

QC Batch: 63672 Date Analyzed: 2009-09-03 Analyzed By: JR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Fluoride		mg/L	5.00	4.52	90	90 - 110	2009-09-03

Standard (CCV-2)

QC Batch: 63672 Date Analyzed: 2009-09-03 Analyzed By: JR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Sulfate		mg/L	25.0	22.6	90	90 - 110	2009-09-03

Standard (ICV-1)

QC Batch: 63681 Date Analyzed: 2009-09-17 Analyzed By: KV

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate and Nitrite as N		mg/L	0.200	0.205	102	85 - 115	2009-09-17

Standard (CCV-1)

QC Batch: 63681 Date Analyzed: 2009-09-17 Analyzed By: KV

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate and Nitrite as N		mg/L	0.200	0.188	94	85 - 115	2009-09-17

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CHAIN OF CUSTODY RECORD

PROJECT NO.:

PROJECT NAME: HELSTF ChromateSpill Groundwater

SAMPLER'S SIGNATURE: [signature]

ANALYSIS REQUESTED

DATE	TIME	SAMPLE ID	MATRIX	LAB NO.	NO. OF CONTAINERS	~~VOC~~	DRO	GRO	TOC	~~SVOC~~	~~Explosives~~	TRPH	Water Quality	~~Total Cyanide~~	Nutrients	REMARKS
9-1-09	1030	HLSF-0143-HMW-013-09	WATER	209097	14	X	X	X	X	X	X	X	X	X	X	NOTE: 24 HR. HOLD TIME ON HEX. CHROME

PROJECT INFORMATION	SAMPLE RECEIVED		1. RELINQUISHED BY: (SIGNATURE)	2. RELINQUISHED BY: (SIGNATURE)	3. RECEIVED BY LAB: (SIGNATURE)
PROJECT MANAGER: Brad Davis	TOTAL NO. OF CONTAINERS		[signature] (PRINTED NAME) Gabriel Garcia	[signature] (PRINTED NAME) James Ratcliff	Carol Fox (PRINTED NAME) Carol Fox
SHIPPING ID NO.	CHAIN OF CUSTODY SEALS		RECEIVED BY: (SIGNATURE) [signature]	RECEIVED BY: (SIGNATURE) [signature]	(COMPANY) Trace - Lbk
	GOOD CONDITION/CHILLED	6/7 ice By FM	(TIME/ DATE) 1230 9-1-09	(TIME/ DATE) 1200 9-2-09	(TIME/ DATE) 9-3-09 9:45
VIA: Lab Courier	CONFORMS TO RECORD		SPECIAL INSTRUCTIONS / COMMENTS: PLEASE SEE ATTACHED ANALYTE LIST FOR DETAILS	VOA's - LS43635704 IR 5.5/5.9	LS43635703 5.5/5.9 | LS43635702 3.9/4.3 IR

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Las Cruces, NM 88011
575-532-1526 p
575-532-1507 f

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CHAIN OF CUSTODY RECORD

PROJECT NO.

PROJECT NAME: HELSF Chromate Spill Groundwater

SAMPLER'S SIGNATURE:

DATE	TIME	SAMPLE ID	MATRIX	LAB NO.	NO. OF CONTAINERS	ANALYSIS REQUESTED: Total Metals	Diss. Metals	Diss. Ions	REMARKS
9-1-09	1030	HLSF-0163-HMW01-013-090901	WATER	209097	14	X	X	X	NOTE: 24 HR. HOLD TIME ON HEX CHROME

PROJECT INFORMATION	SAMPLES RECEIVED:	1. RELINQUISHED BY: (SIGNATURE)	2. RELINQUISHED BY: (SIGNATURE)
PROJECT MANAGER: Brad Davis	TOTAL NO. OF CONTAINERS:	(PRINTED NAME)	(PRINTED NAME)
SHIPPING ID NO.	CHAIN OF CUSTODY SEALS:	RECEIVED BY: (SIGNATURE)	RECEIVED BY: (SIGNATURE)
VIA: Lab Courier	GOOD CONDITION/ CHILLED: 6/7 D20	(TIME / DATE) 9-1-09	(TIME / DATE) 9-2-09
	CONFORMS TO RECORD:	SPECIAL INSTRUCTIONS / COMMENTS: PLEASE SEE ATTACHED ANALYTE LIST FOR DETAILS	

3. RECEIVED BY LAB: (SIGNATURE)	VOAs - LS 436 35704	LS 436 35703	LS 436 35705
(PRINTED NAME) Carol Fox	5.5/5.9 IR	5.5/5.9	3.9/4.3 IR
(COMPANY) Trace-Lok			
(TIME / DATE) 9-3-09 9:45			

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